Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An apparatus for wirelessly communicating a leading bit string comprising a header and a body, and a trailing bit string comprising a header and a body, the apparatus comprising:

an encoder configured for encoding ~~data~~ a data bit stream and a parameter bit stream to form the body of the leading bit string, and forming the header of the trailing bit string to include at least one bit of a parameter to be used by a receiver in decoding ~~the encoded data~~ the data bit stream and the parameter bit stream; and

a transmitter configured for transmitting to the receiver a wireless signal representing at the receiver the leading bit string and then the trailing bit string;

wherein the encoder includes a data encoder for encoding the data bit stream and a parameter encoder for encoding the parameter bit stream.

2. (Original) The apparatus of claim 1, wherein the receiver comprises a digital television receiver.

3. (Original) The apparatus of claim 1, wherein said encoder is further configured for creating said bit strings so that a parameter in at least one of the leading and trailing bit string headers is utilizable by an equalizer in said receiver to resolve a signal that embodies at least one of the leading and trailing bit strings.

4.   (Original) The apparatus of claim 1, wherein said parameter is one of a plurality of parameters having bits, the plural bits being divided into two bit groups each having an equal number of bits, one of said groups being utilized in forming the leading bit string header, the other group being utilized in forming the trailing bit string header, each of said groups further comprising a parity bit generated based on the bits of equal number of the group.

5.   (Currently Amended) An apparatus for wirelessly transmitting a ~~bit stream~~ data bit stream and a parameter bit stream, the apparatus comprising:

an encoder configured for applying a fixed code to encode bits of the ~~bit stream~~ data bit stream and the parameter bit stream, one-by-one, to create an encoded bit-stream; and

a transmitter configured for modulating the encoded bit-stream to produce a signal whose frequency range at any given time is predetermined independently of the code, and for wirelessly transmitting said signal within the frequency range;

wherein the encoder includes a data encoder for encoding the data bit stream and a parameter encoder for encoding the parameter bit stream.

6.   (Original) The apparatus of claim 5, wherein the fixed code comprises a linear recursive sequence.

7.   (Original) The apparatus of claim 6, wherein the fixed code is "0001111010111001".

8.   (Original) The apparatus of claim 6, wherein the encoder further comprises a sequence generator that includes:

a four-element shift register, the first element having an input terminal and the fourth element having an output terminal; and

an exclusive-OR (XOR) gate tap disposed between the third and fourth elements, wherein said output terminal is connected to feed back to the first element and to the XOR gate tap.

9.   (Currently Amended) The apparatus of claim 5, wherein ~~said bit-stream before encoding is a parameter bit-stream and said bits define a parameter in the header of a bit string comprising a header and a body,~~ said encoder ~~being further~~ is configured for ~~encoding a data bit-stream and for~~ combining the parameter and data bit-streams, after the parameter and data bit-streams have been encoded, to create said encoded bit-stream that is modulated to produce said signal whose frequency range at any given time is predetermined independently of the code, the parameter being defined so as to be utilizable by an equalizer configured to receive and to resolve said signal, the equalizer being part of a receiver configured for decoding the encoded data bit-stream from said body.

10.   (Original) The apparatus of claim 5, wherein:

said encoder is further configured for encoding data to form the body of a leading bit string comprising a header and a body, and for forming the header of a trailing bit string comprising a header and a body so that the trailing bit string header includes at least one bit that represents a parameter defined by said bits and to be used by a receiver in decoding the data

encoded to form the leading bit string body, the encoder being further configured for combining the encoded data and said at least one bit in forming said encoded bit-stream to be modulated; and

said transmitter is further configured for transmitting to the receiver by means of said signal the leading bit string and then the trailing bit string.

11. (Original) The apparatus of claim 10, wherein the bit-by-bit encoding of said bits is performed one bit at a time, the data to be encoded in forming said body of the leading bit string not being encoded one bit at a time using a fixed code.

12. (Currently Amended) A method for wirelessly communicating via a processor a leading bit string comprising a header and a body, and a trailing data string comprising a header and a body, the method comprising the steps of:

encoding data a data bit stream and a parameter bit stream via an encoder;

forming the body of the leading bit string from the encoded data bit streams;

forming the header of the trailing bit string to include at least one bit of a parameter to be used by a receiver in decoding the encoded data bit streams; and

transmitting to the receiver a wireless signal representing at the receiver the leading bit string and then the trailing bit string;

wherein the encoder includes a data encoder for encoding the data bit stream and a parameter encoder for encoding the parameter bit stream.

13. (Original) The method of claim 12, wherein the receiver comprises a digital television receiver.

14. (Original) The method of claim 12, further comprising the step of utilizing, by an equalizer in said receiver, a parameter in at least one of the leading and trailing bit string headers to resolve a signal that embodies at least one of the leading and trailing bit strings.

15. (Original) The method of claim 1, wherein said parameter is one of a plurality of parameters having bits, the forming step further comprising the steps of:

dividing the plural bits into two bit groups each having an equal number of bits;

generating a parity bit for each group, both parity bits being generated based on the bits of equal number of the group;

utilizing one of said groups in forming the leading bit string header; and

utilizing the other group in forming the trailing bit string header.

16. (Currently Amended) A method for wirelessly transmitting via a processor a bit-stream, the method comprising the steps of:

determining a fixed code;

applying the fixed code to encode bits of the bit-stream a data bit stream and a parameter bit stream via an encoder, one-by-one, to create an encoded bit-stream;

modulating the encoded bit-stream to produce a signal whose frequency range at any given time is predetermined independently of the code; and

wirelessly transmitting said signal within the frequency range;

wherein the encoder includes a data encoder for encoding the data bit stream and a parameter encoder for encoding the parameter bit stream.

17. (Original) The method of claim 16, wherein the fixed code comprises a linear recursive sequence.

18. (Original) The method of claim 17, wherein the fixed code is "0001111010111001".

19. (Original) The method of claim 17, further comprising the steps of:

providing a four-element shift register, the first element having an input terminal and the fourth element having an output terminal;

disposing an exclusive-OR (XOR) gate tap between the third and fourth elements; and

connecting said output terminal to feed back to the first element and to the XOR gate tap.

20. (Currently Amended) The method of claim 16, ~~wherein said bit-stream before encoding is a parameter bit-stream, said method~~ further comprising the steps of:

~~forming said parameter bit-stream to contain a parameter that said bits define;~~

combining the parameter bit-stream with [[a]] the data bit-stream, after the parameter and data bit-streams have been encoded, to create said encoded bit-stream that is modulated to produce said signal whose frequency range at any given time is predetermined independently of the code;

configuring a bit string to comprise a header and a body, the header containing the encoded parameter and the body containing the encoded data bit-stream; and

performing the forming, combining and configuring steps so that the parameter is utilizable by an equalizer that is to receive and to resolve said signal and that is part of a receiver for decoding the encoded data bit-stream.

21.   (Original) The method of claim 16, further comprising the steps of:

encoding data to form the body of a leading bit stream comprising a header and body;

forming the header of a trailing bit stream, comprising a header and a body, to include at least one bit that represents a parameter defined by said bits and to be used by a receiver in decoding the data encoded to form the leading bit string body;

combining the encoded and said at least one bit in forming said encoded bit-stream to be modulated; and

transmitting to the receiver by means of said signal the leading bit string and then the trailing bit string.

22.   (Original) The method of claim 21, wherein the bit-by-bit encoding of said bits is performed one bit at a time, the data to be encoded in forming said body of the leading bit stream not being encoded one bit at a time using a fixed code.